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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,855	04/05/2004	Akihiro Okano	US01-03060	1830

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EXAMINER

RICHER, AARON M

ART UNIT PAPER NUMBER

2628

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/816,855	Applicant(s) OKANO, AKIHIRO	
	Examiner Aaron M. Richer	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 8, and 15 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed with respect to claims 2, 3, 5, 6, 9, 10, 12, 13, and 16-19 have been fully considered but they are not persuasive. Applicant argues that one skilled in the art would not have looked to Crinon to improve a burn-in prevention system. However, Crinon, Weitbruch, and Bellwood are all concerned with blurring an image and one looking to improve the blurring techniques of Bellwood would certainly look to other blurring references.

Applicant further argues that Crinon does not teach blurring of an image signal associated with a single displayed screen. Examiner disagrees with this assessment, noting that while Crinon's quantization process does take into account multiple frames, accounting for motion between them, the quantization still takes place in a "single screen". Note p. 1, section 0010 (emphasis added): "The second **image** is divided into non-overlapping macroblocks". This is different from say, the invention of Weitbruch, which blurs an image that is actually made up of two screens, but as noted above the inventions are still combinable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, 8, 11, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellwood (U.S. Publication 2004/0114040) in view of Weitbruch (U.S. Publication 2004/0165064).

5. As to claims 1 and 8, Bellwood discloses a device for preventing burn-in of a display screen of an image display device, the device comprising:

a blurring device for applying a blurring process to an input image signal to obtain a blurred image signal (p. 2, sections 0020-0021; an image is moved slightly; while this may be undetectable by a viewer, it is still a distortion of the original image that causes the image to be less clear and therefore reads on a blurring process). Bellwood does not disclose the contrast inversion device claimed.

Weitbruch, however, discloses a contrast inversion device for inverting contrast of a luminance level of the blurred image signal associated with the single displayed screen to generate a burn-in prevention image signal associated with the single displayed screen (p. 3, sections 0076-0078; p. 4, sections 0079, 0081; the "inverted picture" drawn on top of the original to prevent burn-in corresponds a contrast inversion device; this can be a "single screen" if only a single screen is causing the burn-in). The motivation for this is to reduce ghosting images from a preceding picture (p. 2, section 0023). It would have been obvious to one skilled in the art to modify Bellwood to invert contrast of a signal in order to reduce ghosting images from a preceding picture as taught by Weitbruch.

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6. As to claims 4, 11, and 20, Bellwood discloses a device for applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal (p. 2, sections 0020-0021).

7. As to claim 15, Bellwood discloses a display apparatus comprising:

a display device including a display screen (p. 2, sections 0020-0021; a screen is disclosed);

a contour modification circuit for blurring an input image to obtain a blurred image when the input image includes a still image (fig. 4; element 404; p. 2; sections 0020-0021). Bellwood does not disclose the contrast inversion device claimed.

Weitbruch, however, discloses a contrast inversion circuit for inverting contrast of a luminance level of the blurred image to obtain a contrast inverted image (fig. 8; fig. 20, elements 12,13,15,16) and a driver for displaying the contrast inverted image on the display screen when the input image includes a still image (fig. 8; fig. 20, elements 10,11,13,14). The motivation for this is to reduce ghosting images from a preceding picture (p. 2, section 0023). It would have been obvious to one skilled in the art to modify Bellwood to invert contrast of a signal in order to reduce ghosting images from a preceding picture as taught by Weitbruch.

8. Claims 2, 3, 5, 6, 9, 10, 12, 13, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellwood in view of Weitbruch and further in view of Crinon (U.S. Publication 2002/0191846).

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9. As to claims 2, 9, 16, and 18, neither Bellwood nor Weitbruch discloses a device wherein pixel data of the input image signal is grouped into a plurality of pixel blocks, each pixel block includes N rows.times.M columns of pixels and the blurring device is a quantizer that quantizes the pixel data of the input image signal for each pixel block. Crinon, however, discloses an image divided into non-overlapping macroblocks, which correspond to a plurality of pixel blocks that can consist of any number of rows or columns of pixels (p. 1, section 0010). Crinon further discloses a quantizer to handle the macroblock input, which works to combine foreground and background images (p. 3, section 0038). The quantizer from Crinon would be used in the burn-in compensation method of Weitbruch, as Weitbruch's invention "wiped" the screen. It would have been obvious to one skilled in the art to modify Bellwood and Weitbruch to utilize a quantizer in "wiping" in order to speed image input as taught by Crinon.

10. As to claims 3, 6, 10, 13, and 19, Crinon discloses a device for varying a size of the pixel block for each field of the input image signal (p. 2, section 0030; changing macroblock dimensions correspond to the ability to vary size of a pixel block for each field).

11. As to claims 5, 12, and 17, Crinon discloses a device wherein pixel data of the input image signal is grouped into a plurality of pixel blocks, each pixel block includes N rows.times.M columns of pixels (see rejection of claim 2), and the blurring device is a mosaicking circuit that mosaicks the pixel data of the input image signal for each pixel block (p. 1, section 0010). Macroblocks and vectors are used to align an individual macroblock with a corresponding mosaic sample array. This mosaicking creates a

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combined image that would result in a blurred image that Weitbruch's invention could then apply contrast inversion to. Also, motivation for combining the inventions can be found in the rejection to claim 2.

12. As to claims 7 and 14, Bellwood discloses applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal (p. 2, sections 0020-0021).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMR
9/7/06



KEE M. TUNG
SUPERVISORY PATENT EXAMINER